**IN THE SPECIFICATION:**

**Paragraph beginning at line 24 of page 16 has been amended as follows:**

A flowchart for a manufacturing method of a light-propagating probe for a near-field microscope of a first embodiment of the present invention is shown in Fig. 1. Also, Fig. 2 is a perspective view showing the structure of a probe for a near-field microscope manufactured using the manufacturing method for a light-propagating probe for a near-field microscope of the present invention, and Fig. 3 is a cross sectional side view of a light-propagating probe for a near-field microscope. The light-propagating probe 6 is formed using an optical fiber 1 comprising a core 2 for passing light, and a clad 3 ~~have~~ having a different refractive index ~~to~~ from that of the core 2. The optical fiber 1 is sharpened, and formed into a hook shape. A reflecting surface 5, for detecting displacement of the tip section of the light-propagating probe 6 due to the resilience of a resilient spring section constituting a spring operating part 10 by an optical lever method used in an AFM device, is formed at a rear section of the hook-shaped section. A probe fixing body 4 is arranged behind the spring operating part 10. The tip section of the optical fiber probe 1 has a pointed tip section 7 that is sharpened, and is ~~configured~~ covered by a metal film

coating 9 except at the tip end thereof to form a transparent opening 8.

**Paragraph beginning at line 17 of page 20 has been amended as follows:**

A single mode fiber having a core diameter appropriate to the used wavelength region and a clad diameter of 125 ~~im~~ μm can be used as the optical fiber 1. The optical fiber 1 is a dielectric, and since it is easy for foreign matter to be attached due to static electricity the manufacturing process for the light-propagating probe described in the following ~~are~~ is preferably generally carried out in an anti-static environment. Specifically, it is generally effective to use a static eraser blower called an ionizer, ~~and~~ or an anti-static sheet in the operating environment, ~~and~~ as well as carrying out temperature and humidity control, or safeguarding the light propagating body ~~is safeguarded~~ during manufacture using a metal case that does not charge.

**Paragraph beginning at line 19 of page 21 has been amended as follows:**

The structure of a cylindrical cavity fault test sample is shown in Fig. 6. A light fiber 1 ~~having a synthetic resin coating (jacket)~~ that is being subjected to testing ~~removed~~ , and after removal therefrom of the synthetic resin coating (jacket), is placed on a first glass plate 21 such as a glass slide for microscopic observation, refractive index matching oil 23 having the same refractive index as the optical fiber 1 is dripped on, and ~~the an~~ a second glass plate 22 such as a slide glass or cover glass is placed on top. At this time testing efficiency for the optical fiber 1 is high if a plurality of fibers are arranged. If this sample is observed using an optical microscope, since matching oil 23 fills around the optical fibers 1 it is possible to observe the inside of the optical fibers with reduced influence from the reflecting surface of the optical fibers 1. In particular, if dark-field observation is used, it is possible to vividly observe the external form of cavity defects. This fault test is preferably carried out for the ends of the optical fibers themselves making the actual probes themselves, but because this type of fault is often spread out over distances of from a few tens of cm to a few m, it is also possible to cut from a few mm to a few tens of mm close to the section actually used in manufacture as a test sample.

**Paragraph beginning at line 2 of page 30 has been amended as follows:**

The process of sharpening using chemical etching is schematically shown in Fig. 12. Fig. 12A is a schematic drawing showing the structure of an etching device, and Fig. 12B is an enlarged schematic drawing of a sharpened part. A first solution layer 61 uses an etching fluid mainly composed of hydrofluoric acid, while the second solution layer 62 uses a material that has a lower specific gravity than the first solution layer and will not react or mix with the first solution layer 61. An optical fiber 1 from which processes up to arranging the probe fixing body 4 have been completed is attached to an etching jig 64. The etching jig 64 has a structure capable of being moved up and down by, for example, a Z-axis movement mechanism, and can put the optical fiber 1 into and remove it from the etching fluid. A length reference wire 63 constituting a reference for probe length is arranged in the etching jig 64 in advance. The etching jig 64 is lowered gently, the optical fiber 1 inserted into the first solution layer 61, and lowering of the etching jig 64 is stopped at a position where a length reference wire 63 reaches a boundary surface of the first solution layer 61 and the second solution layer 62. At the position where the length reference wire 63 reaches the boundary surface of the first solution layer 61 and the second solution layer 62, a meniscus

is formed ~~one~~ once the length reference wire 63 reaches the boundary surface, which means it can be detected by careful observation. Easy observation is made possible using a magnifying glass having a comparatively large operating distance, such as a stereoscopic microscope, as required.

**Paragraph beginning at line 2 of page 36 has been amended as follows:**

Fig. 16 is a drawing showing the step of forming the reflecting surface, Fig. 16A showing a state before polishing is started, and Fig. 16B showing a state during polishing. The optical fiber 1 that has been sharpened and formed into a hook shape is fixed to a polishing stage 92 by the probe fixing body 4 with the tip section facing upwards. The polishing stage 92 is configured capable of moving up and down using a Z-axis movement mechanism 93. An angle A of the optical fiber 1 with respect to a polishing surface of a disc-shaped rotating polishing plate 91 is set to an angle of from 20° to 60°. If the polishing stage 92 is moved downwards by the Z-axis movement mechanism 93 a rear surface of an upper part of the hook shape of the optical fiber 1 comes into contact with the polishing plate, and if the polishing stage 92 is lowered further the spring operating part 10 is flexed to generate polishing pressure. The polishing stage is fixed at a position where an angle B between the polishing surface of the polishing plate 91 and the polishing section of the

optical fiber becomes a desired angle, for example, greater that 0° and less than angle A, and fixed duration polishing is carried out. The angle B, that is the angle of the reflecting surface 5, is selected from 0.5° to 5°. The rotating polishing plate used can be a wet type, but as long as a mirror surface can be obtained, a dry process can also be used. The spring constant of the spring operating part 10 for generating polishing pressure is selected using length of the spring operating part, namely mounting position of the probe fixing body 4. Specifically, the mounting position is designed so as to be able to cope with various factors, such as specification of a device used as the probe fixing body 4 and the structure of the vapor deposition unit, but is, for example, from 5 mm to 50 mm. The rotating direction of the rotating polishing plate 91 is selected to be a direction such that the polishing direction is from the probe fixing body 4 towards the tip. This polishing direction is a direction that does not cause compressive stress (buckling) in the optical fiber 1.